



FORSTER - ANIMALS OF NORTH AMERICA - LONDON, 1771

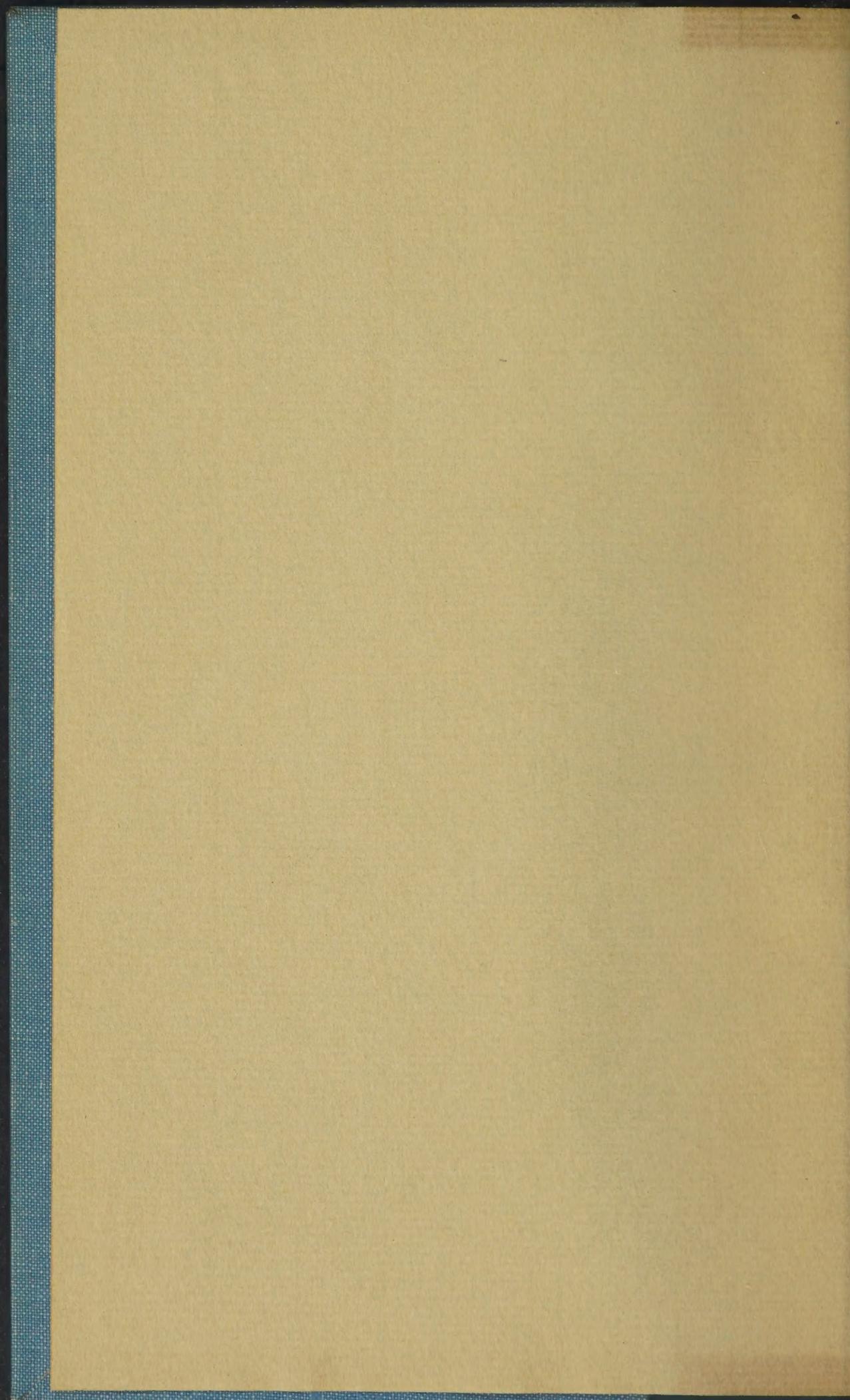




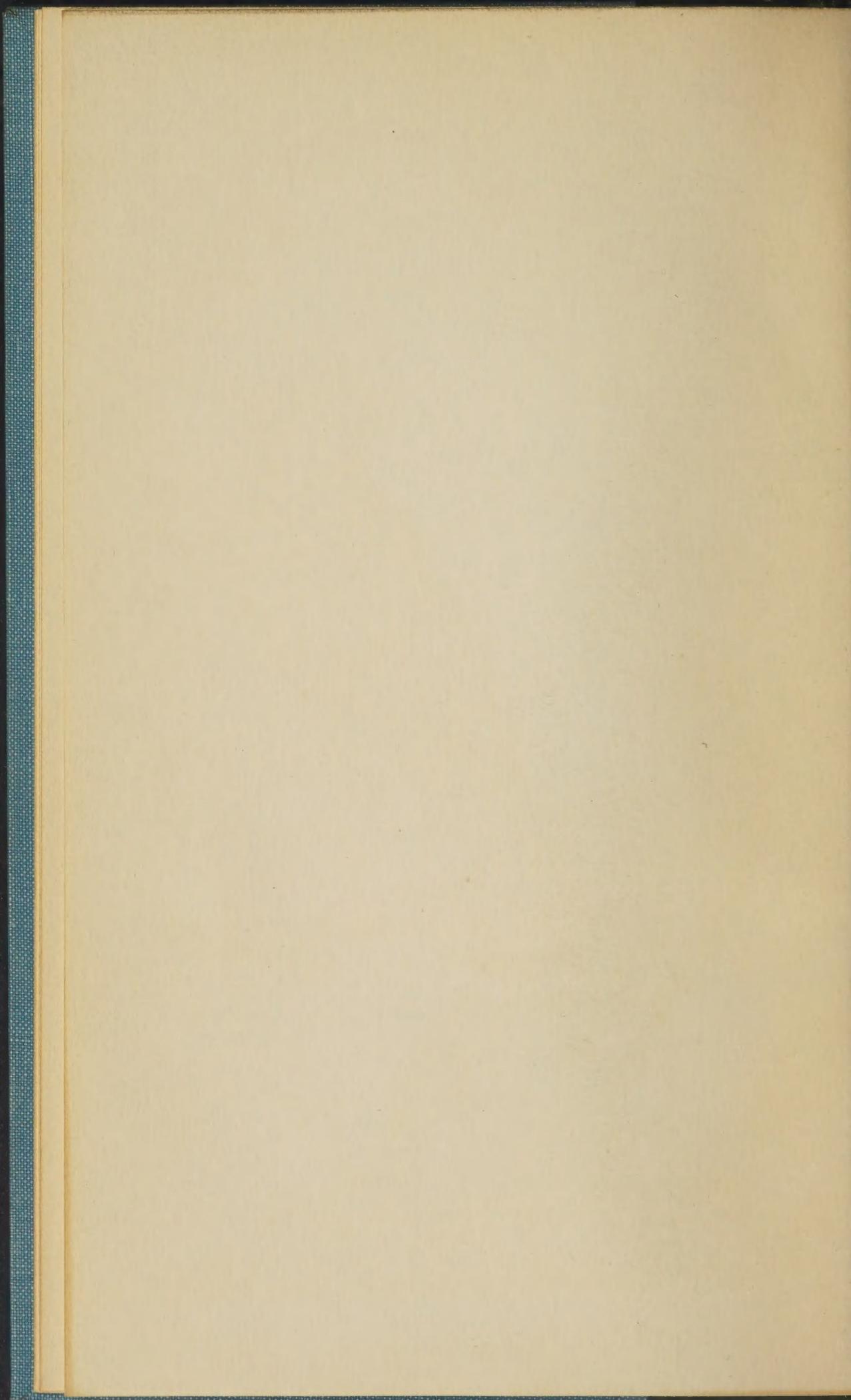


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Little Falcons.  
*Falco Sparverius, LINN.*



M. Griffith Pinxit

R. Murray Sc.

A  
CATALOGUE  
OF THE  
ANIMALS  
OF  
NORTH AMERICA.

CONTAINING,  
An Enumeration of the known QUADRUPEDS, BIRDS,  
REPTILES, FISH, INSECTS, Crustaceous and  
Testaceous ANIMALS; many of which are New, and  
never described before.

To which are added,  
SHORT DIRECTIONS  
FOR  
COLLECTING, PRESERVING, and TRANSPORTING,  
all Kinds of  
NATURAL HISTORY CURIOSITIES.

By JOHN REINHOLD FORSTER, F. A. S.

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*Non ad unam Naturā formam opus suum præstat; sed in ipsa  
varietate se jactat.*

SENECA, Quæst. Nat. VII. 27.

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L O N D O N :

Sold by B. WHITE, at Horace's Head, in Fleet-Street.

M.DCC.LXXI.

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T O

MARMADUKE TUNSTALL, Esq.

Dear SIR,

THE repeated favours *You* were so kind to bestow upon me, in the compass of a short acquaintance, and the zeal with which *You* promote the great cause of Natural History ; encouraged me to prefix *Your* Name to this Publication, and give me an opportunity, thus publicly, to acknowledge the assistance *Your* benevolent and generous friendship favoured me with.

Nothing is left to me, but the simple mention of thanks ; and my sincere wishes for *Your* health, happiness, and the enjoyment of every intellectual and moral blessing. I am, with the truest regard,

Dear SIR,

your most obliged,

obedient,

humble Servant,

London, April:  
24, 1771.

JOHN REINHOLD FORSTER

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## To the R E A D E R.

I Had hinted in the Preface to the third volume of *Kalm's Travels*, that I could publish but an imperfect and small catalogue of *North American* animals; and therefore declined to give it. Since that time, I have been pressed by some worthy friends to publish that catalogue, such as it is; and what is still more, I have been favoured with ample materials by a Gentleman, who is forming a collection for a Natural History of *North America*, and hopes by this to incite the inquisitive and learned resident in that country, to search, and to transmit to their friends in *England*, the productions of their several provinces. The Zoology of the first four classes of animals in *Great Britain*, has been very accurately and compleatly published; that of the country of the descendants of *Great-Britain* ought with most propriety to follow, as it interests the Mother Country most. These reasons had a great weight with me; and I offer this small catalogue merely as an essay towards forming a more compleat Natural History of that extensive continent. To instruct the Collectors, I have added to this list some short directions for the best method of preserving and transporting the various subjects of Natural History.

The Quadrupeds of this list are referred to the Synopsis of Quadrupeds of Mr. *Pennant*; the Birds, Fish, Reptiles, Insects, and Crustacea, to *Linnæus*, *Brisson*, Mr. *Edwards*, and

To the READER.

and *Catesby*; some few excepted, which are referred to the *Planches enluminées*, published at *Paris*, and marked here *Pl. enl.* so as *Catesby* with a single C. and those which are common to *Great Britain* and *America*, to the *British Zoology*.

The Animals which have recently been discovered in *North America*, or overlooked by Mr. *Catesby*, are distinguished by *N. S.* marking a *New Species*; and by *B.* and *Mus. Bl.* The first authority is from a Collection formed by a Gentleman in his voyage to *Newfoundland*; the second, from a most select and numerous Collection of *American Animals*, belonging to a Lady in *Lancashire*.

The New Species, in the Catalogue of Birds, I had leave to insert here from Mr. *Pennant's* manuscript; and those of Insects are taken from my own manuscript descriptions of such Insects as were not described by Dr. *Linnaeus*.

The print prefixed here represents an elegant little Falcon, drawn and engraved from a fine specimen lately brought over from *North America*.

N. B. The Animals marked E are of European Origin; having been introduced there by the Spaniards or English, after the discovery of the New World: and those marked Eur. are originally natives of both Continents.



## CLASS I. QUADRUPEDS.

## DIV. I. HOOFED.

## SECT. I. WHOLE HOOFED.

Genus.			syn. quad.
I. HORSE	Generous	E.	Nº 1
	Ass	E.	3

## SECT. II. CLOVEN HOOFED.

II. SHEEP	Common	E.	8
III. GOAT	Domeftic	E.	p. 14
IV. DEER	Elk, or Moose, <i>Eur.</i>		Nº 35
	Rein	<i>Eur.</i>	36
	Stag	<i>Eur.</i>	38
	Virginian	N. S.	39
	Roe?		43
V. Hog	Common	E.	54

## DIV. II. DIGITATED QUADRUPEDS.

VI. Dog	Faithful	E.	Nº 110
	Wolf	<i>Eur.</i>	111
	Fox	<i>Eur.</i>	112
	Arctic	<i>Eur.</i>	113
	Grey		114
	Silvery		115

VII. Cat	Brown		129
	Common	E.	133
	Lynx	<i>Eur.</i>	135
	Bay Lynx	N. S.	136

VIII.

VIII. BEAR	Black	Eur.	138
	Polar		139
	Wolverene	Eur.	140
	Raccoon		141
IX. BADGER	American	N. S?	143
X. OPOSSUM	Virginian		144
XI. WEESEL	Stoat	Eur.	N° 151
	Pine Martin	Eur.	155
	Fisher	N. S.	157
	Pekan and Vison		
	Striated		166
	Skunk		167
XII. OTTER	Greater	Eur.	173
	Lesser	Eur.	174
	Sea		175
XIII. HARE	Common	Eur.	183
	Alpine	Eur.	184
	Rabbit	E.	185
XIV. BEAVER	Castor	Eur.	190
	Musk		191
XV. PORCUPINE	Canada		196
XVI. MARMOT	Maryland		198
	Quebec	N. S.	199
XVII. SQUIRREL	Common	Eur.	206
	& Hudson's Bay		
	Grey		209
	Black		210
	β Cat		
	Ground		216
	Flying	Eur.	221
	β hooded		
XVIII. RAT	Black	E.	226
	Brown?		227
	Water	Eur.	228
	Mouse	E.	229
		A 4	Field

	Field Short-tailed	Eur. Eur.	230 233
XIX. MOLE	β. yellow Radiated Long-tailed Brown	N. S.	p. 312 Nº 243 244 245
XX. WALRUS	Arctic		Nº 263
XXI. SEAL	Common Great Rough Hooded Harp Little Ursine Leotrine	Eur. Eur. N. S. N. S. N. S. N. S. N. S.	265 266 267 268 269 270 271 272
XXII. MANATI	Manati		273
XXIII. BAT	New York Long haired	N. S. N. S.	283 p. 367

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## C L A S S II. B I R D S.

## D I V. I. L A N D B I R D S.

## S E C T. I. R A P A C I O U S.

I. VULTURE. Carrion. V. aura. 122. C. I. 6.

II. FALCON	Bald Eagle Sea Ringtail Black-bellied White Osprey	F. leucocephalus. C. I. 1. F. ossifragus. in exhibitions F. Fulvus. Edw. I. N. S. <i>Du Pratz</i> , II. 75. F. Haliaetus. C. I. 2.
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Gentil

## ( 9 )

Gentil Falcon	F. gentilis <i>Mr. B.</i>
Goshawk	F. palumbarius. <i>Lawson</i>
Ashcoloured	<i>Edw.</i> 53.
Sacre	<i>Mr. B. de Buffon</i>
Winter	N. S. <i>Mus. Bl.</i>
Dusky	<i>Edw.</i> 3. 4.
Rough-footed	N. S. <i>Mr. B.</i>
Chocolate	N. S. <i>do.</i>
Marsh	<i>Edw.</i> 291.
Buzzard	F. Buteo. <i>Mr. B.</i>
White-rump'd	F. Hudsonius. <i>Edw.</i> 107.
Fork-tail	F. furcatus. C. I. 4.
Pigeon	F. columbarius. C. I. 3.
Little	F. sparverius. C. I. 5.

## III. OWL

Great	<i>Strix bubo. Edw.</i> 60
Short-eared	<i>Br. Zool. Mus. Bl.</i>
Red	<i>St. Asio. C. I.</i> 7.
Mottled	N. S. <i>Mus. Bl.</i>

\* \*

Snowy	<i>St. nyctea. Edw.</i> 61
Barred	N. S. <i>Mus. Bl.</i>
Canada	<i>Br. I.</i> 518.
Brown	<i>Br. Zool. Mr. B.</i>
White	<i>ib.</i>
Hawk	<i>Edw.</i> 62.
Little.	<i>Mus. Bl. Br. Zool.</i>

## IV. SHRIKE

Cinereous.	<i>Lanius excubitor. C. app.</i>
Crested.	<i>L. Canadensis</i>
Louisiane.	<i>Pl. entl.</i> 397.

## S E C T. II. PIES.

## V. PARROT

Caroline.	<i>Psittacus Carolinensis. C. I.</i> 11.
Illinois.	<i>Ps. pertinax. Edw.</i> 234. <i>Br.</i>

## VI. CROW

Raven.	<i>Br. Zool. Mr. B.</i>
Carrion.	<i>Br. Zool. Mus. Bl.</i>
Magpie	<i>Er. Zool. Edw.</i> p. 126.
Cinereous	<i>C. Canadensis</i>
Blue.	<i>C. cristatus. C. I.</i> 15.

## VII.

VII. ORIOLE	Redwing	Oriolus Phœniceus.	C. I. 13
	Baltimore	O. Baltimorus	48
	Spurious	O. Spurius	49
	Brown-headed	N. S. Mr Kuckahn	
VIII. GRACULE	Shining	Gracula quiscula	C. I. 12
IX. CUCKOO	Caroline	Cuculus Americanus.	C. I. 9.
X. WOODPECKER	White-billed.	Picus principalis	C. I. 16
	Buff-cheeked	P. pileatus	C. I. 17
	Gold-wing	P. auratus	18
	Scarlet	P. erythrocephalus	20
	Red-bellied	P. Carolinus	19
	Spotted	Br. Zool. I. 178. Mus. Bl.	
	Hairy	P. villosus	19
	Yellow-bellied	P. varius	21
	Little	P. pubescens	ib.
	Black	Albin	
	Three-toed	P. tridactylus.	Edw.
XI. NUTHATCH.	Greater	Br. Zool.	22
	Lesser	ib.	
	Canada	Br. III. 593	
XII. KINGFISHER	Great	Alcedo alcyon	69
	Louisiane	Pratz. II. 82	
XIII. CREEPER	Bahama	Certhia flaveola	59
	Common	Br. Zool. Mus. Bl.	
XIV. HUMMER	Red-throated	Trochilus colubris	C. I. 65

## S E C T. III. GALLINACEOUS.

XV. TURKEY	Wild	Meleagris Gallopavo.
XVI. GROUSE	Ruffed	Tetrao umbellus Edw. 248
	Pinnated	T. cupido C. III. 1.
	Long-tailed	T. Phasianellus Edw. 117
	Spotted	T. Canadensis Edw. 71, III.
	White	T. Lagopus Edw. 72
	Partridge	T. Virginianus C. III. 12
	Quail?	T. Mexicanus

S E C T.

## S E C T. IV. COLUMBINE.

XVII. PIGEON	Passenger	<i>Columba migratoria</i>	C. I. 23
	Caroline	<i>C. Carolinensis</i>	24
	White-crowned	<i>C. leucocephala</i>	25
	Canada	<i>C. canadensis</i>	
	Ground	<i>C. Passerina</i>	24

## S E C T. V. PASSERINE.

XVIII. THRUSH	Mimic	<i>Turdus polyglottos</i>	27
	Ferruginous	<i>T. rufus</i>	28
	Fieldfare	<i>T. migratorius</i>	29
	Red-leg'd	<i>T. plumbeus</i>	30
	Black	<i>Br. II.</i>	245
	Little	<i>Edw. 296</i>	C. I. 31
	Golden-crowned	<i>Motacilla auro-capilla</i>	<i>Edw. 252</i>

XIX. STARE	Crescent	<i>Alauda magna</i>	C. I. 33
	New York	<i>N. S. Mus. Bl.</i>	

## XX. CHATTERER Prib.

*Ampelis garrulus*, C. I. 46. *Edw.*

XXI. GROSBEAK.	Crossbill	<i>Br. Zool.</i>	<i>Edw. 303</i>
	Pine	<i>Br. Zool. IV.</i>	<i>Edw. 123, 124</i>
	Crested	<i>Loxia cardinalis</i>	C. I. 38
	Mexican	<i>L. Mexicana</i>	<i>Mus. Bl.</i>
	Roseate	<i>L. Ludoviciana</i>	
	Spotted	<i>N. S. Mus. Bl.</i>	
	Mississipi		
	Dominican	<i>L. Dominicana</i>	
	Canada	<i>L. Canadensis</i>	
	Black	<i>L. nigra</i>	C. I. 68
	Blue	<i>L. cærulea</i>	39
	Violet	<i>L. violacea</i>	40
	Fantail	<i>Pl. enl.</i>	380
	Grey	<i>Pl. enl.</i>	393
	Red-headed	<i>N. S. Mr. Kuckabn</i>	

## XXII. BUNTING

Snow	<i>Emberiza nivalis</i>	<i>Edw. 126</i>
Winter	<i>E. hyemalis</i>	C. I. 36
Rice	<i>E. oryzivora</i>	C. I. 14. <i>Edw. 291</i> Painted

Painted Louisiiane Blue ?	E. Ciris C. 44 <i>Edw.</i> 130. 273 E. Ludoviciana. <i>Br.</i> III.	
		298

XXIII. TANAGRE	Blue Green Bishop Red	Tanagra cyanea Motacilla guira <i>Edw.</i> 351. <i>Mus. Bl.</i> T. Episcopus. <i>Du Pratz.</i> II. 94 T. rubra C. I. 56
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XXIV. FINCH	Towhe Golden Orange Mountain Little Cow-pen Bahama Caroline White-throated Ferruginous Crimson head Fasciated Greater red-poll.	Fringilla Erythrophthalmæ Fr. tristis Fr. zena Fr. montana <i>Edw.</i> 269 C. I. 35 34 Fr. bicolor 37 <i>Pl. en.</i> 181. 223 ? <i>Edw.</i> 304 <i>Edw.</i> 354. <i>Br.</i> III. 296 <i>N. S. Mus. Bl.</i> <i>N. S. D.</i> <i>Br. Zool. Mus. Bl.</i>
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XXV. FLY-CATCHER	Tyrant Fork-tail Chattering Crested Black-cap Cinereous Red-eyed Cat Canada Blue Brown	Lanius tyrannus C. I. 55 Muscicapa tyrannus C. I. 50 Musc. crinita C. I. 52 C. I. 53. Musc. virens M. olivacea C. I. 54 M. Carolinenfis 66 M. Canadensis Motacilla sialis C. I. 47 C. I. 54
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XXVI. LARK	Shore Red Calandre	Alauda alpestris C. I. 32 <i>Br. Zool. Edw.</i> 297 <i>Edw.</i> 268
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XXVII. WAGTAIL	Redstart Yellow breast Black throat Yellow throat. Yellow rump.	Muscicapa ruticilla. C. I. 67 Turdus trichas. <i>Edw.</i> 237 Motacilla Canadensis. <i>Edw.</i> 252 C. I. 62. <i>Edw.</i> 255
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Red

Red poll	M. petechia. <i>Edw.</i> 256
Black poll	
Pine	Certhia pinus. C. I. 61.
Crowned	M. coronata. <i>Edw.</i> 298
Golden wing	M. chrysoptera. <i>Edw.</i> 299
Green	<i>Edw.</i> 300
Pied	<i>Edw. ib.</i> M. varia
Bloody-side	M. Pensylvanica. <i>Edw.</i> 301
Cœrulean	M. cœrulea. <i>Edw.</i> 302
Worm-eater.	<i>Edw.</i> 305
Yellow	<i>Br. III.</i> 492
Louisiane	500
Great	508
Quebec	M. Icterocephala
Yellow-tailed?	<i>Edw.</i> 257
Spotted	<i>Edw.</i> 257
Cinereous	<i>Br. III.</i> 524
Olive	<i>Pl. enl.</i> 58
Ruby-crowned	M. calendula. <i>Edw.</i> 254
Golden-crested.	<i>Br. Zool.</i> C. App.
Yellow	<i>Br. Zool.</i> II. 266. <i>Edw.</i>
Wren	<i>Mus. Bl.</i>

## XXVIII. TITMOUSE

Crested	Parus bicolor. C. I. 57
Hooded	C. I. 60
Virginian	P. Virginianus. C. I. 58
American	P. Americanus 64
Canada	<i>Br. III.</i> 553.
Colemouse	<i>Br. Zool.</i> Mr. B.

## XXIX. SWALLOW

House	<i>Br. Zool.</i> Mr. B.
Martin]	<i>ib.</i> <i>Mus. Bl.</i>
Sand	<i>ib.</i> C. App.
Swift	<i>ib.</i> Lawson
Purple	Hirundo purpurea. C. I. 51
Canada	H. subis. <i>Edw.</i> 120
Aculeated	H. pelasgia. C. III. 8

XXX. GOATSUCKER. Common  
Lesser

	<i>Br. Zool.</i> C. I. 8
	Capr. minor. C. III. 16.

## D I V. II. WATER FOWL.

## S E C T. VI. CLOVEN-FOOTED.

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<b>XXXI. HERON.</b>	Hooping	Ardea Americanus. C. I. 75
	Canada	A. Canadensis. Edw. 133
	Brown	A. Herodias. Edw. 136
	*	*
	Common	<i>Br. Zool. C. App.</i>
	Violet	A. violacea. C. I. 79
	Blue	A. cœrulea 76
	Cinereous	Edw. 135
	Great white	A. alba. <i>Muf. Bl.</i>
	Little white	A. æquinoctialis. C. I. 77
	Green	A. virens. 80
	Bittern	A. Hudsonias. Edw. 135
	Minute	<i>Br. Zool. Muf. Bl.</i>
	Caroline	C. I. 78
	Green head	<i>Mr. Kuckahn</i>
<b>XXXII. IBIS</b>	Wood	Tantalus loculator. C. I. 81
	Scarlet	T. ruber 84
	White	T. albus 82
	Brown	T. fuscus 83
<b>XXXIII. CURLEW</b>	Eskimaux	N. S. <i>Mr. B.</i>
<b>XXXIV. WOODCOCK.</b>	American	<i>Muf. Bl.</i>
	Snipe	<i>Br. Zool. Muf. Bl.</i>
	Jack	<i>ib. Muf. Bl.</i>
	Godwit	<i>ib. C. App.</i>
	Red	<i>ib. Edw. 138</i>
	Great	Scolopax fedoa. Edw. 137
	Nodding	N. S. <i>Mr. B.</i>
	Spotted	<i>Muf. Bl.</i>
<b>XXXV. SAND-PIPER</b>	Turnstone	Tringa interpres Edw. 141
	Common	<i>Br. Zool. Mr. Kuckahn</i>
	Spotted	<i>ib. Edw. 270</i>
	Cinereous	<i>ib. Mr. B.</i>

Knot

## ( 15 )

Knot	<i>ib.</i>	<i>Edw.</i> 276
Redshank	<i>ib.</i>	<i>C. App.</i>
Grey Pt.	<i>ib.</i>	<i>C. App.</i>
Purre	<i>ib.</i>	<i>Mus. Dl.</i>
Little	N. S.	
Glossy	<i>Mr. B.</i>	N. S.
Green	<i>Br. Zool.</i>	<i>Mr. Kuckahn</i>

XXXVI. PLOVER	Green	<i>Br. Zool.</i> <i>Mus. Bl.</i>
	Pie	<i>ib.</i> <i>C. I.</i> 85
	Noisy	<i>Charadrius vociferus.</i> <i>C. I.</i> 71
	Golden	<i>Ch. apricarius</i> <i>Edw.</i> 140
	Lark	<i>Br. Zool.</i> <i>Mus. Bl.</i>
	Sanderling	<i>ib.</i> <i>Mus. Bl.</i>

XXXVII. RAIL	Clapper	<i>Mus. Bl.</i>
	Red-breasted	<i>Edw.</i> 279

XXXVIII. WATER-HEN	Caroline	<i>Rallus Carolinus.</i> <i>Edw.</i> 144.
	Common	<i>C. I.</i> 70. <i>Br. Zool.</i> <i>Mus. Bl.</i>

## S E C T. VII. With PINNATED FEET.

XXXIX. COOT	Common	<i>Br. Zool.</i> <i>Mus. Bl.</i>
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XL. PHALAROPE	Grey	<i>ib.</i> <i>Edw.</i> 308
	Red.	<i>Edw.</i> 142
	Brown	<i>Edw.</i> 46

XLI. GREBE,	Eared	<i>Edw.</i> 96
	Pied bill	<i>C. I.</i> 91,

## S E C T. VIII. WEBBED-FOOTED.

*	XLII. FLAMMANT	Red	<i>Phoenicopterus ruber.</i> <i>C. I.</i> 73
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XLIII. AUK	Great	<i>Br. Zool.</i> <i>Edw.</i> 147
	Razor	<i>ib.</i> <i>Edw.</i> 358
	Puffin	<i>ib.</i> <i>Edw.</i> <i>ib.</i>
	New	N. S. <i>Br. Mus.</i>
	Little	<i>Br. Zool.</i> <i>Edw.</i> 91
	Guillemot	<i>ib.</i> <i>Edw.</i> 359
	Black	<i>ib.</i>

XLIV.

<b>XLIV. DIVER</b>	Northern Immer Speckled Lumme	<i>Br. Zool. Mus. Bl.</i> <i>Colymbus Immer. Mus. Bl.</i> <i>Br. Zool. Mus. Bl.</i> <i>ib. Edw. 97. 146</i>
<b>XLV. CUT-WATER</b>	Black	<i>Rhynchos nigra. C. I. 90</i>
<b>XLVI. TERN</b>	Noddy Black Greater Lesser	<i>Sterna stolidia. C. I. 88</i> <i>Br. Zool. Kalm</i> <i>ib. Mus. Bl.</i> <i>ib. Mus. Bl.</i>
<b>XLVII. GULL</b>	Great Wagel Herring Kittiwake Laughing Black toed Arctic	<i>ib. Mr. B.</i> <i>ib.</i> <i>ib.</i> <i>ib.</i> <i>ib.</i> <i>ib.</i> <i>ib. Edw. 148, 149.</i>
<b>XLVIII. PETREL</b>	Fulmar Shear water Storm	<i>ib.</i> <i>ib. Edw. 359</i> <i>ib. Edw. 91</i>
<b>XLIX. SAW-BILL.</b>	Goosander Redbreasted Hooded Smew	<i>Br. Zool. Mus. Bl.</i> <i>ib. Edw. 95.</i> <i>Mergus cucullatus. Edw. 360</i> <i>Br. Zool. Mus. Bl.</i>
<b>L. DUCK</b>	Swan Canada Wild-goose White-fronted Blue Bernacle Brant Snow Eider King Velvet Black Shoveler Golden eye Harlequin	<i>ib. Edw. 150</i> <i>Anas Canadensis. Edw. 151</i> <i>Br. Zool.</i> <i>ib. Edw. 153</i> <i>A. cærulescens, Edw. 152</i> <i>Br. Zool.</i> <i>ib.</i> <i>Anser niveus. Br. VI. Lawson</i> <i>Br. Zool. Edw. 98</i> <i>A. spectabilis. Edw. 154</i> <i>Br. Zool. Mus. Bl.</i> <i>A. perspicillata. Edw. 155</i> <i>Br. Zool. C. I. 96. fæm.</i> <i>ib. Mus. Bl.</i> <i>A. histrionica. C. I. 98. fæm.</i> <i>{Edw. 99. 157.</i> <i>Pied</i>

Pied	A. albeola.	<i>Edw.</i> 100
Pochard	<i>Br. Zool.</i>	<i>C. App.</i>
Pin-tail	<i>ib.</i>	<i>Mus. Bl.</i>
Swallow-tail	<i>ib.</i>	<i>Edw.</i> 280
Buffel	A. Bucephala.	C. I. 95
White-faced	A. discors.	C. I. 100
Ilathera	A. Bahamensis.	C. I. 93
Brown	<i>Mr. B.</i>	
Summer	A. sponsa.	<i>Edw.</i> 101. C. I. 97.
Widgeon	<i>Br. Zool.</i>	<i>Mus. Bl.</i>
Teal	<i>ib.</i>	<i>Mr. B.</i>
Blue-wing	C. I.	99.
Mallard	<i>Br. Zool.</i>	<i>C. App.</i>
Scaup	<i>ib.</i>	<i>Mus. Bl.</i>
<hr/>		
LI. PELECAN	Pelecan	<i>Edw.</i> 93.
	Corvorant	<i>Br. Zool. Mus. Bl.</i>
	Shag	<i>ib. C. App.</i>
	Gannet	<i>Mr. B. Br. Zool.</i>

## CLASS III. REPTILES.

## SECT. I. With FOUR FEET.

I. TORTOISE	Green	Testudo Mydas	C. II.	38
	Hawksbill	T. caretta		39
	Logger-head			40
	Trunk			
	Chequered	T. Carolina.	<i>Edw.</i> 205	
	Mud		<i>Edw.</i> 287	
	Rough?	T. scabra		
	Indented?	T. denticulata		
	River	N. S. Dr. Garden		
<hr/>				
II. FROG	Bull	Rana ocellata.	C. II.	72
	Land		C. 69	
	Water		C. 70	
			Green	

	Green	C. 71
	Horned	
	Striped	R. cornuta
III. LIZARD		N. S. Mr. Ellis
	Allegator	Lacerta Crocodylus. C. II. 63
	Lion	L. sex-lineata 68
	Guano	L. Iguana 64
	Green	65
	Blue-tail	L. fasciata 67
	Spotted	L. punctata III. 10
	Canada	N. S. Mr. Ellis
	Annulated	Mus. Bl.

## S E C T. II. With Two FEET.

IV. SIREN	Caroline	Siren Lacertina. Pb. Tr. LVI. 189
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## S E C T. III. Without FEET.

V. SNAKE	Rattle	Crotalus horridus C. II. 41
	Lesser	Cr. miliaris C. 4
	Chequered	Cr. Durissus
	†	
	Hog-nose	Boa contortrix C. 56
	† †	
	Striped	Coluber leberis C. 58
	Wampum	Coluber fasciatus
	Green	C. ordinatus 53
	Chain	C. getulus 52
	Ribbon	C. faurita 50
	Black	C. constrictor 48
	Bead	C. guttatus 60
	Familiar	C. æstivus 57
	Porraceous	C. mysterizans 47
	Crossed	Coluber simus
	Smooth-headed	striatulus
	Dotted	punctatus
	Ringed	doliatus
	Brown	sipedon
	Yellow	fulvius
	Vittated	firtalis
		Water

Water viper	C.	43
Black viper		44
Brown viper		45
Copper-bellied		46
Brown-bead		49
Speckled		51
Penfacula	N. S. <i>Mr. Ellis</i>	
Coach-whip	C. 54	
Corn	C. 55.	
little	<i>Edw.</i> 349	
	†	
Glafs	Anguis ventralis	C. II. 59
	† † †	
	† †	
	† † †	
Little Sloeworm	Cœcilia N. S. <i>Mr. Ellis.</i>	

## CLASS IV. FISH.

## SECT. I. CETACEOUS.

I. NARWHAL	Narwhal	
II. WHALE	Common	<i>Br. Zool</i>
	Pike-headed ?	<i>ib.</i>
	Fin	<i>ib.</i>
	Beaked	<i>ib.</i>
III. CACHALOT	Blunt-headed	<i>ib.</i>
	High-finned	<i>ib.</i>
IV. DOLPHIN	Porpesse	<i>ib.</i>
	Grampus	

## SECT. II. CARTILAGINOUS.

V. LAMPREY	Common	<i>Br. Zool. G. App.</i>
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VI. RAY	Thorn-back Sting Devil-fish	<i>C. App.</i> <i>C. App.</i> <i>C. App.</i>
VII. SHARK	White ? Saw	<i>C. App.</i> <i>Squalus Pristis. C. App.</i>
VIII. FISHING FROG	Common	<i>Br. Zool. C. App.</i>
IX. STURGEON	European Blunt-nosed	<i>ib.</i> <i>Mus. Bl.</i>
X. BALISTES	Unicorn Hispid Old	<i>B. monoceros.</i> C. II. 19 <i>B. hispidus</i> <i>B. vetula.</i> C. II. 22
XI. TETRODON	Smooth Globe Sun	<i>T. lavigatus</i> <i>T. lagocephalus</i> C. II. 28 <i>Br. Zool. C. App.</i>
XII. LUMP	Lump-fish	<i>Br. Zool.</i>
XIII. PIPE-FISH	Shorter	<i>ib.</i>

## S E C T. III. BONY.

XIV. EEL	Muray Eel Conger	* APODAL. Muræna Helena. C. II. 20. 21 <i>Br. Zool.</i> <i>ib.</i>
XV. SWORD	Sword-fish	<i>ib.</i>
XVI. COD	Common Frost Tau	*** JUGULAR. <i>ib.</i> Gadus callarias. <i>Mus. Bl.</i> Gadus Tau.
XVII. BLENNY	pustulated	N. S. Mr. B.
XVIII. REMORA	Remora	*** THORACIC. Ech. neucrates.      C. II. 26
XIX. CORYPHENE	Parrot Blue Lineated	C. Psittacus C. II. 18 C. lineata
		XX. BULL-

<b>XX. BULL-HEAD</b>	Father-lasher	<i>Br. Zool.</i>
<b>XXI. FLOUNDER</b>	Holibut	<i>Br. Zool.</i>
	Flounder	<i>ib.</i>
	Plaise	<i>ib.</i>
	Rough	<i>Pleuronectes plagiatus</i>
	Sole	<i>Br. Zool.</i>
	Lineated	<i>Pl. lineatus</i>
	Lunated	<i>Pl. lunata</i> C. II. 27
<b>XXII. CHÆTODON</b>	Scaleless	<i>Ch. alepidotus</i>
	Angel	<i>Ch. trifasciatus</i> C. II. 31
<b>XXIII. GILTHEAD</b>	Lane-snapper	<i>Sparus synagris</i> C. II. 17
	Pork-fish	<i>Sp. rhomboides</i> C. II. 4
	Porgy	<i>Sp. chrysops</i> C. II. 16
	Silver	<i>Sp. argyrops.</i>
	Radiated	<i>Sp. radiatus.</i> C. II. 12
	Virginian	<i>Sp. virginicus</i>
<b>XXIV. WRASSE</b>	Mutton	<i>Labrus anthias</i> C. II. 25
	Mangrove	<i>L. griseus</i> C. II. 9
	Hog	<i>L. flavus</i> C. II. 11
	Gaper	<i>L. hiatula</i>
	Drum	<i>L. chromis</i> C. App. XXXIII.
	Yellow	<i>L. fulvus</i> C. II. 10
	Cinereous	C. II. 11. fig. 2
	Bone	C. II. 13
	Great?	C. II. 15
<b>XXV. PERCH</b>	River?	<i>Br. Zool. C. App.</i>
	Yellow-bellied	<i>Labrus auritus.</i> C. II. 8
	Dotted	<i>Perca punctata</i>
	Whiting?	<i>P. alburnus.</i> C. II. 12
	Croker	<i>P. undulata</i> C. II. 3.
	Eyed	<i>P. ocellata</i>
	Noble	<i>P. nobilis</i>
	Philadelphian	<i>P. Philadelphica</i>
	Black	<i>P. atraria</i>
	Margate	<i>P. chrysopera</i> C. II. 2
	Negro	<i>P. punctata</i> C. II. 7
	Hind	<i>P. guttata</i> C. II. 14
	Venemous	<i>P. venenosa</i> C. II. 5
	Black-tail	<i>P. melanura</i> C. II. 7 B 3 Rudder

Rudder	P. fœtatrix	C. II. 8
Striated	P. striata	
Grunt	P. formosa	C. II. 6
Trifurcated	P. trifurca	
Bass?	Br. Zool.	C. App. XXXIII,
Apodal	C. II. 4.	

XXVI. STICKLE-BACK	Crevalle	Gasterosteus Carolinus
	Canada	G. Canadus
	Skip-Jack	G. Saltatrix. C. II. 14
	Two-spined	Mus. Bl.
XXVII. MACKREL	Yellow-tail	Scomber Hippo
XXVIII. GURNARD	Flying	Trigla evolans
	Rough	N. S. Mus. Bl.

\* \* \* \*

## ABDOMINAL.

XXIX. LOCH	Beardless	Cobitis heteroclitæ
XXX. AMIA	Mud-fish	Amia calva
XXXI. SILURE	Cat	Silurus felis. S. catus. C. II.
	Armed	S. cataphractus. C. III. 19 <sup>23</sup>
XXXII. TROUT	Salmon	Br. Zool.
	Trout	Br. Zool. Mr. B.
	White fish	Salmo lavarettus?
	Long	S. fœtens. C. II. 2
XXXIII. PIKE	Fox	Esox vulpes. C. II. 1
	Green	E. Osseus. C. II. 30
	Sea-needle	Br. Zool.
	Under-jaw	E. Brasiliensis. Mr. B.
	Barracuda	C. II. 1
	Common	Br. Zool. C. App.
XXXIV. ELOPS	Forked	El. Saurus
XXXV. ARGENTINE	Caroline	Arg. Carolina. C. II. 24 *

\* Perhaps a herring.

XXXVI.

XXXVI. A T H E R I N E	Silver-fish	Ath. menidia
XXXVII. M U L L E T	White	Mugil albula. C. II. 6
	Common	Br. Zool. C. App.
XXXVIII. P O L Y N E M E	Virginian	P. Virginicus
XXXIX. H E R R I N G	Common	Br. Zool.
	Shad	ib. C. App. XXXII
X L . C A R P.	Common	Br. Zool. C. App.
	Roach	ib. ib.
	Dace	ib. ib.
	Mummy-Chog.	N. S. Mus. Bl.

## C L A S S V. I N S E C T S.

## S E C T. I. B E E T L E S.

\*

I. C H A F E R	Scarabæus lunaris.	Mus. Bl.
	aloëus	
	lancifer	
	nasicornis	
	Carolinus	
	mimas	
	carnifex	
	nuchicornis	
	Marianus	
	stercorarius	
	Amazonus	
	Surinamus	
	nitidus	
	sepicola	
	horticola, a variety	
	occidentalis	
	lanigerus	
	fasciatus	
	Indus	
	brunnus	
	punctatus	

nobilis  
quadrimaculatus  
Hudsonias. Drury t. 35. f. 7 N.  
S. Mus. Bl.  
rufus. N. S. Mus. Bl.  
lævipes. N. S. Mus. Bl.  
piceus. N. S. Mus. Bl.  
biunguiculatus. N. S. Mus. Bl.  
pilosus. N. S. Mus. Bl.  
testaceus. N. S. Mus. Bl.

II. STAG-BEETLE      *Lucanus*      cervus  
capreolus  
interruptus  
— — — *N. B.* a brown variety

III. LEATHER-EATER      *Dermestes*      lardarius  
capucinus  
typographus  
fasciatus. N. S. Mus. Bl.

IV. MIMICK-BEETLE      *Hister*      unicolor

V. WHIRL-BEETLE      *Gyrinus*      Americanus

VI. CARRION-BEETLE      *Silpha*      vespillo. *N. B.* a great variety, and  
the small one too  
noveboracensis. N. S. Mus. Bl.  
bipustulata  
quadripustulata  
Americana  
obscura  
aquatica

VII. WEEVIL      *Curculio*      noveboracenfis. N. S. Mus. Bl.  
palmarum  
Bacchus  
dispar  
anchoraco  
nucum  
incanus  
scutellatus. N. S. Mus. Bl.

VIII. NUT-BEETLE      *Attelabus*      curculionoides  
Penfylvanicus.

IX. LADY-

## IX. LADY-FLY

*Coccinella*      *impunctata*  
*7-punctata*  
*13-punctata*  
*2-pustulata*

\* \*

## X. GLOW-WORM

*Lampyris*      *Pyralis*  
*marginata*  
*pilosa. N. S. Mus. Bl.*

## XI. SEED-BEETLE

*Bruchus Pisi*      *Kalm I. 173—177*

## XII. GOLDEN-HONEY-BEETLE

*Chrysomela*      *5-punctata*  
*occidentalis*  
*Boleti*  
*Philadelphica*  
*3-maculata*  
*Americana*  
*lineola*  
*bicolor, variety with red thighs,*  
*Mus. Bl.*  
*scopolina*  
*obscura*  
*10-maculata*  
*12-punctata*  
*Phellandrii*  
*tomentosa*  
*Rhoi. N. S. Mus. Bl.*  
*spinicornis. N. S. Mus. Bl.*  
*lepturoides. N. S. Mus. Bl.*  
*lineato-punctata. N. S. Mus. Bl.*  
*trifurcata. N. S. Mus. Bl.*  
*laticlavia. N. S. Mus. Bl.*  
*fimbriata. N. S. Mus. Bl.*  
*frontalis. N. S. Mus. Bl.*  
*Hudsonias. N. S. Mus. Bl.*

XIII. BLISTER-BEETLE *Meloë*

*vesicatorius*  
*majalis*  
*cinerea. N. S. Mus. Bl.*

XIV. STINKING-BEETLE *Tenebrio*

*chalybeus*  
*Mauritanicus*  
*culinaris*

		culinaris
		fosfor
XV. TORTOISE-BEETLE	Cassida	viridis bipustula ? <i>Mus. Bl.</i>
		* * *
XVI. GLOSSY-BEETLE	Cicindela	hybrida Germanica riparia
XVII. GROUND-BEETLE	Carabus	granulatus, γ. hortensis leucophthalmus inquisitor lividus, small variety marginatus crepitans Americanus cyanocephalus vulgaris piceus fericeus. N. S. <i>Mus. Bl.</i> fasciatus. N. S. <i>Mus. Bl.</i>
XVIII. BURN-COW	Buprestis	gigantea mariana chrysostigma Austriaca
XIX. SPRING-BEETLE	Elater	oculatus phosporeus ligneus ? obscurus
XX. WATER-BEETLE	Dytiscus	fuscipes marginatus
XXI. SOFTWINGED-BEETLE	Malacoptyyx Cantharis	Americanus. N. S. <i>Mus. Bl.</i> tropica
XXII. WOOD-BEETLE	Leptura	mystica detrita
		Robiniae.

XXIII. CAPRICORN-BEETLE.      *Cerambyx*

- Robiniæ. *Drury.* t. 41. f. 2.  
 N. S. *Mus. Bl.*  
*Americana.* N. S. *Mus. Bl.*  
 nitens  
 imbricornis  
 coriarius, variety  
 melanopus  
 lineatus  
 spinibarbis  
 araneiformis  
 4-maculatus  
 succinctus  
 suaveolens  
*Coquus*  
*hispicornis.* *Drury.* t. 41. f. 4.  
 rusticus  
 bajulus  
*tetraphthalmus.* N. S. *Mus. Bl.*  
*brunnus.* N. S. *Mus. Bl.*  
*palliatus.* N. S. *Mus. Bl.*  
*clavipes.* N. S. *Mus. Bl.*

XXIV. ROVE-BEETLE      *Staphylinus*

- hirtus  
*erythropterus*

XXV. CLIFT-WINGED BEETLE      *Necydalis*

- collaris.* N. S. *Mus. Bl.*

XXVI. EARWIG      *Forficula*      *auricularia*

## S E C T. II. HALFWINGED INSECTS.

XXVII. COCKROACH      *Blatta*

- Americana*  
*Orientalis*  
*Germanica*  
*livida.* N. S. *Mus. Bl.*

XXVIII. CAMELCRICKET      *Mantis*

- irrorata*  
*Carolina*

XXIX. LOCUST      *Gryllus*

- brevicornis*  
*gryllotalpa*  
*campestris*  
*citrifolius*

citrifolius  
laurifolius  
myrtifolius?  
succinctus  
cristatus  
Carolinus

## XXX. FLEA-LOCUST

## Cicada

squamigera  
tibicen  
septendecim  
violacea  
spumaria  
phalænoïdes  
Lanio  
carinata. N. S. *Mus. Bl.*  
guttata. N. S. *Mus. Bl.*  
coccinea. N. S. *Mus. Bl.*

## XXXI. BOAT-FLY

## Notonecta

glaucha  
lineata. N. S. *Mus. Bl.*

## XXXII. WATERSCORPION Nepa

grandis

## XXXIII. Bug

## Cimex

lecticularis. *Kalm.*  
bidens  
ictericus  
floridanus  
hæmorrhous  
baccarum  
prasinus  
biguttatus, variety with red dots  
and marges  
cristatus  
trifasciatus  
succinatus  
lacustris

## XXXIV. PLANTSUCKER

## Chermes

Alni. *Kalm*

## XXXV. COCHINEAL

## Coccus

Cacti. *Bartram's Florida*

## S E C T. III. PAPILIONACEOUS. INSECTS.

XXXVI. BUTTERFLY	Papilio	Troilus. <i>Drury.</i> t. 11. f. 1—5?
		Ajax. <i>Edw.</i> 34.
		Xuthus. <i>Drury.</i> t. 22. f. 1. 2.
		Antilochus
		Podalirius
		Protesilaus. <i>Drury.</i> t. 22. f. 34.
		Apollo. <i>Mus. Bl.</i>
		Brassicæ
		Hyale
		Eubule
		Ecclipsis
		Midamus
		Plexippus
		Misippus
		Chrysippus
		Canthus
		Almana
		Orithya
		Cardui
		Antiopa. <i>Kalm.</i>
		urticæ
		C. album.
		Atalanta
		Euphrosyne. <i>Kalm.</i>
		Cupido
		quercus
		Echion
		Virgaureæ
		Bixa
XXXVII. HAWK-MOTH	Sphinx	ocellata
		Populi
		Carolina
		Celerio
		Pinastris
		fuciformis. ♂. Tityus
XXXVIII. MOTH	Phalæna	Atlas
		Cecropia
		Paphia
		Luna

( 30. )

Luna
Virgo
Plantaginis
Chrysorrhœa
lubricipeda
paranympha
Gamma
Psi
bilineata
viridana
bella
pulchella

#### S E C T. IV. INSECTS with nervous Wings.

XXXIX. DRAGON- FLY	Libellula	flaveola depressa ænea umbrata Americana Carolina
XL. CAMEL-FLY	Raphidia	cornuta
XLI. SPRING-FLY	Phryganea	bicaudata
XLII. PEARL-FLY	Hemerobius	pectinicornis
XLIII. SCORPION- FLY	Panorpa	communis

#### S E C T. V. INSECTS with Stings.

XLIV. BEE	Apis	cordata mellifica rostrata violacea Carolina pratorum æstuans noveboracensis N. S. <i>Mus. Bl.</i> vespiformis. N. S. <i>Mus. Bl.</i> sericea. N. S. <i>Mus. Bl.</i>
		XLV.

## ( 31 )

XLV. ANT	Formica	herculeana rufa
XLVI. WASP	Vespa	Carolina maculata. <i>Mus. Bl.</i> annularis quadridens Canadensis
XLVII. GOLDEN WALL-FLY		Chrysif cyanea
XLVIII. TAILED WASP	Sirex	Columba. <i>Mus. Bl.</i>
XLIX. SAW-FLY	Tenthredo	scrophulariae lutea viridis
L. ICHNEUMON WASP	Sphex	sabulosa coerulea Pensylvanica arenaria
LI. ICHNEUMON- FLY	Ichneumon	luteus
LII. NAKED BEE	Mutilla	occidentalis

## S E C T. VI. Two-winged INSECTS.

LIII. GNAT	Culex	pipiens. <i>Musquito</i> pulicaris
LIV. WASP-FLY	Afilus	æstuans gibbosus
LV. FLOWER- BREEZE	Bombylius	minor. <i>Mus. Bl.</i>
LVI. HORSE-FLY	Hippobosca	hirundinis. <i>Mus. Bl.</i>

LVII.

<b>LVII. FLY</b>	<i>Musca</i>	illucens. Drury, t. 44. f. 1. <i>M. Bl.</i> leucopa vomitoria carnaria domestica
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<b>LVIII. WHAME</b>	<i>Tabanus</i>	Americanus. N. S. <i>Mus. Bl.</i>
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<b>LIX. GADFLY</b>	<i>Oestrus</i>	Tarandi
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**S E C T. VII. INSECTS without Wings**

<b>LX. SUGARMITE</b>	<i>Lepisma</i>	saccharina
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<b>LXI. GROUND- FLEA</b>	<i>Podura</i>	aquatica
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<b>LXII. DEATH- WATCH</b>	<i>Termes</i>	pulsatorium
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<b>LXIII. LOUSE</b>	<i>Pediculus</i>	humanus ricinoides fuis cervi meleagridis
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<b>LXIV. FLEA</b>	<i>Pulex</i>	irritans penetrans. <i>Chigger</i>
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<b>LXV. TICK</b>	<i>Acarus</i>	Americanus Siro holosericeus
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<b>LXVI. LONG- LEGGED SPIDER</b>	<i>Phalangium</i>	grossipes opilio acarooides balænarum reniforme
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<b>LXVII. SPIDER</b>	<i>Aranea</i>	diadema clavipes venatoria
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<b>LXVIII. SCOR- PION</b>	<i>Scorpio</i>	Americanus australis. <i>Mus. Bl.</i>
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LXIX.

## LXIX. CRABFISH.

sentry	Cancer pinnophylax
minute	C. minutus. <i>Kalm.</i>
land	C. ruricola. <i>Cat.</i> II. 32.
florid	C. floridus
Sand	C. vocans. <i>Cat.</i> II. 35.
common	C. mænas. <i>Mr. B.</i>
roughshelled	C. granulatus. <i>Cat.</i> II. 36. N° 2.
spider	C. araneus. <i>Mr. B.</i>
dotted	C. punctatus
rock	C. Grapsus. <i>Cat.</i> II. 36. N° 1.
redclawed	<i>Cat.</i> II. 37. f. 1.

## LXX. LOBSTER

common	Cancer Gammarus
cynic	C. Diogenes. <i>Cat.</i> II. 33. f. 1. 2.
Soldier	<i>Cat.</i> II. 34
Cray	C. carcinus

## LXXI. MONOCULE

King's Crab	Monoculus Polyphemus. <i>Mus. Bl.</i>
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## LXXII. MILLEPEE

Oniscus	Oestrum. <i>Mus. Bl.</i>
	Physodes. <i>Mus. Bl.</i>
	Ceti
	Asellus

## LXXIII. CENTIPEE

Scolopendra	forficata
	morsitans. <i>Cat.</i> II. 2.
	occidentalis
	marina

## LXXIV. GALLYWORM

Julus	graillus
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TESTA

( 34 )

## T E S T A C E O U S.

REFERENCES to American Shells, engraved in Lister's  
Hist. Conch.

LAND	N°	Sea Bivalves. N°	
	19	34.	279
	45	196.	358
	69	200.	434
	82	277.	436
	91	Sea turbinate.	855. a. 12
	92		1058.—10
	93		1059—2
	94		4
RIVER	3	River Bivalve	5
TURBONATED	4		6
	5		9
	6		10
	7		15
	8		
	35		
	44		
	45		
	46		

SHORT

S H O R T D I R E C T I O N S  
 For LOVERS and PROMOTERS of  
 NATURAL HISTORY,

In what manner Specimens of all Kinds may be collected, preserved, and transported to distant Countries.

I. **A**LL Quadrupeds of a great bulk must be skinned as soon as possible after death; the tail, claws, teeth, horns, ears, bristles on the nose and chin, are carefully to be preserved; the hair of the fur as little stained with blood as possible; the opening is to be as small as it can conveniently be without hindering the operation; the inside of the skin may then be washed or brushed over with a liquor, made of an ounce of Sal Ammoniac, dissolved in a quart of water, in which afterwards two ounces of corrosive sublimate Mercury must be put: or four ounces of Arsenic may be boiled in two quarts, or two quarts and a half of water, till all or the greater part of it be dissolved, and the liquor may serve for the same purpose to wash the inside of the skin: then the whole cavity must be stuffed with oakum or tow, likewise imbibed with the above liquor, afterwards dried and mixed

with a powder of four parts of Tobacco-sand, four parts of pounded black Pepper, one part of burnt Alum, and one part of corrosive Sublimate or Arsenic: lastly, the whole is to be sewed with a thread dipt in the above liquor, and the skin thus stuffed must be gently dried, and a day after put into an oven, whose heat must be so gentle, that some hair, or a feather put for trial's sake into it, will not more crisp, or curl, or bend; and thus it will be perfectly dried: the eyes may be filled up with putty, which, when dry, will look like the white part of an eye, and will bear painting, to express with oil-colours the iris and pupil of the natural eye of the animal in question. The whole animal can be put into a box, filled with tow or moss, or oakum steeped in the above liquor, and perfectly dried. The box can be brushed over on both sides with the above liquor, and dried; and the crevices shut up with pieces of paper pasted over; the paste must be made either with the arsenical liquor, or that made with corrosive sublimate instead of common water; and I can assure these precautions, though cheap and simple, will keep the animal in the best preservation on the longest voyages, and for many years in a collection. This way of preparing and securing the boxes for sending specimens abroad, the prepared oakum or tow, the powder and liquor mentioned above, are always to be understood when I afterwards speak of prepared boxes, prepared tow, moss, or oakum, and preparing powder or liquor.

II. Small Quadrupeds may be plunged into a keg of brandy, rack or rum, and thus sent over: observe however to put them first into the coarser kind of spirits; and after they have been therein for a while, and parted with some impurities, you must put them into another vessel with new clean rum or brandy, into which some alum may be put; and they will keep thus better, and be less subject to change or decay.

III. Birds must be opened at the vent, their entrails, lungs,

lungs, and crows taken out, washed with the above preparing liquor, strewed with the preparing powder, stuffed with the prepared oakum or tow; their plumage kept clean during the operation, sewed up with thread steeped in the preparing liquor; the eyes taken out, with the tongue, and both places washed with the same liquor; the mouth must be filled with prepared tow in great birds; the eyes filled up with putty, and, when dry, painted with oil-colour after the natural colour of live birds of the same species, and then dried in an oven: however, as there is all the meat on the bird left, care must be taken not to take too plump or too fat birds, and dry them slowly under the same precaution as mentioned N° I. The operation must be repeated till the bird be perfectly dry. The attitude may be given to the bird before he be put into the oven, by wires that are sharp on one end, and thrust through the bird's legs, body, breast, and neck, and others going through the wings and body. Small birds are likewise well preserved in brandy, rack, or rum; and when arrived at the place of their destination, they must be washed and sweetened in fresh water for several times, and lastly dipped in the preparing liquor, the plumage laid in order, the attitude given to the bird by wires, and then dried. Care must be taken to kill the birds with shot proportioned to their size, and at a reasonable distance, that the specimen may not be mangled and torn. Young birds which have not yet moulted, must not be taken, but old birds in full feather, and, if possible, a specimen of each sex; for the sexes often vary very much in size, feather, and colour. The nests of birds and their eggs would likewise contribute towards perfecting the history of this branch of zoology.

IV. All kinds of Reptiles, as snakes, lizards, and frogs, and small tortoises, must be put into brandy or rum with alum in it: observe not to take such snakes or lizards as have accidentally lost their tails: the scales of these animals must be carefully preserved.

V. Fish of all denominations will likewise bear sending in bottles or kegs with brandy or rum. The fins, and tails of the fish, their scales, and in some kinds, the beards, or other small characteristic appendages, must not be rubbed, torn, or destroyed.

VI. Insects may be caught in a pair of forceps covered with fine green or white gauze, which for better security may be sewed over either with silk or thread. The collector must have a pincushion, with three or four different sizes of pins, calculated for the different sizes of the insects; one or two chip-boxes lined on top and bottom with cork, all steeped in the preparing liquor; one or more larger store-boxes at home to put therein the insects caught in the various excursions; a large Muscheto gauze-net made in the shape of a bat fowling-net, which is to be got ready made in London; and a thread net with small meshes on a round wire hoop fixed to a long pole, in order thus to catch insects that live in water. With these instruments all insects may easily be caught. The beetles must have the pin run through one of their wing-shells; the half-winged insects through the thorax, and so likewise must be done to butterflies, hawk-moths, and moths, to the insects with four and two membranaceous wings, and some of the insects without wings. As the papilionaceous insects very frequently beat their wings, and thus rub off the fine scales covering them, it is necessary to give these creatures, when in the forceps or net, a gentle squeeze at the insertion of the wings in the body, and to put them, when returned home from an excursion, on a large pincushion, by which means they will be enabled to rest their feet on, and this will prevent their fluttering. Beetles, and many of the half-winged insects, may be dipped in the preparing liquor, which will kill and put them soon out of pain and prevent small insects from destroying them. The greater part of beetles may with as great propriety be plunged into a bottle,

bottle, with rum or rack, and thus sent over. This can likewise be done with all marine insects, small crabs, millepees, centipees, spiders, gally worms, scorpions, &c. and many curious grubs or caterpillars, which are the first state which beetles and butterflies, moths, &c. live in. To each insect, not in spirits, put a small paper, on which is marked the time of the year it is caught in, the plant or food it lives upon, its changes, and what animals feast again upon the insect, and other such particularities.

VII. The shells, both those found in fresh water-lakes, ponds, and rivers, and those that live only in the ocean, must not be chosen among those that lie on the shores of the sea and fresh waters, and have been broken and injured, or rolled by the waves and exposed to the air and sun and thus calcined ; but rather as fresh as possible, and with the animal in it : one or two specimens of which may be preserved in Spirits : from the rest extract the animal, and keep the shell, when perfectly dry and sweet, packed up in cotton, tow, or moss. The same is to be done with the echini or sea-eggs, and other crustaceous animals ; especially be careful to preserve their curious spines.

VIII. The harder and stone-like animal productions of the sea, comprehended under the names of Madrepores, Millepores, Cellepores, Corals, and Gorgonias, are either without its inhabitants, and then they want no other care but a good packing in cotton or tow ; or the animal is still alive, and then it would be necessary to put the specimen in a flat vessel filled with Sea-water, and to watch the moment when the animal puts out its arms or branches, and then to pour instantly a good quantity of strong spirit into the water, so that the acid of the liquor may prevent the animal from drawing in its branches or arms : after this, the animal may be  
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put into another glass, with new rum poured on it; the glass must be well corked, and covered with putty and a bladder. All the alcyoniums, sponges, hornwracks, pipe-corals, coralines, sea-feathers, and other curious zoophytes, must be treated in the same manner; as this would be a means to acquaint us with the various inhabitants of this curious tribe of marine productions.

IX. The various worm-like animals comprehended under the name of *Mollusca*, may be best preserved in rum or brandy: only observe to pour the rum on them, when they are putting out their arms, eyes, horns, tentacula, and other parts of their frame.

X. To the quadrupeds, birds, reptiles, fish, and in general to all the specimens, must be fixed lead tickets by means of a wire, and a number on the lead scratched in; which must be referred to, in a paper, where under the same number the collector would be pleased to write the name by which the animal goes in his country, or among the various tribes of Indian nations, with the food, age, growth, nature, manners, haunts, how many young or eggs it brings forth, in what manner it is caught, what it is used for, &c. &c.

XI. The vegetable world affords such an immense variety of productions of so great and varied uses for the various purposes and wants of human society; that it would be rather blameable in men to be indolent in respect to them. Old England can justly glory in being possessed of the greatest variety of plants of all kinds; but even these glorious and spirited efforts in this branch of knowledge, are not yet sufficient to make us acquainted with all the productions of the vegetable kingdom, and their various uses. Besides this, their cultivation at large is often impossible in our cold climate, and reserved for a more mild and happy one, beyond

beyond the Atlantic: nothing is therefore more necessary than to facilitate the transportation of seeds and plants into distant countries in a state of vegetation. The ingenious and great promoter of natural history, John Ellis, Esq; has favoured the world with a curious pamphlet, containing the best directions for that purpose; it would be therefore superfluous to repeat what he has already said, were it not necessary to make my performance more compleat, by inserting a few hints abstracted from his useful publication; and adding to it some remarks of my own.

Seeds of all kinds, intended to be sent abroad, must be collected perfectly ripe in dry weather, and kept dry without exposing them to sunshine. Hard nuts, and leguminous seeds, may be plunged for a moment in the preparing liquor, and then dried again, as this would prevent insects from attacking them. In general must the seeds be previously examined, and care taken that no insects may be sent with them; this can sometimes be discovered by the naked eye, sometimes by a magnifying glass, and by a little brown or black spot on the outside of the seed; such ripe and chosen seeds, if of a good size, each of them may be wrapped in a flat piece of bees-wax; if small or quite minute, many may be put together in such a piece of bees-wax, or, what is still better, in a piece of cerate paper, i. e. paper steeped in melted bees-wax, and all these parcels must be put in a pot or box, proportionate to the quantity of seeds you have, filled with melted wax, to the height of about the size of the seeds you are to send, or the parcels you have made; and when the wax is pretty cool, but still soft, lay your seeds or parcels in rows in the soft wax, and then fill again some melted wax in, and proceed to lay seeds in the same manner till your pot or box be full. Pulpy seeds, as those of strawberries, mulberries, arbutus's,

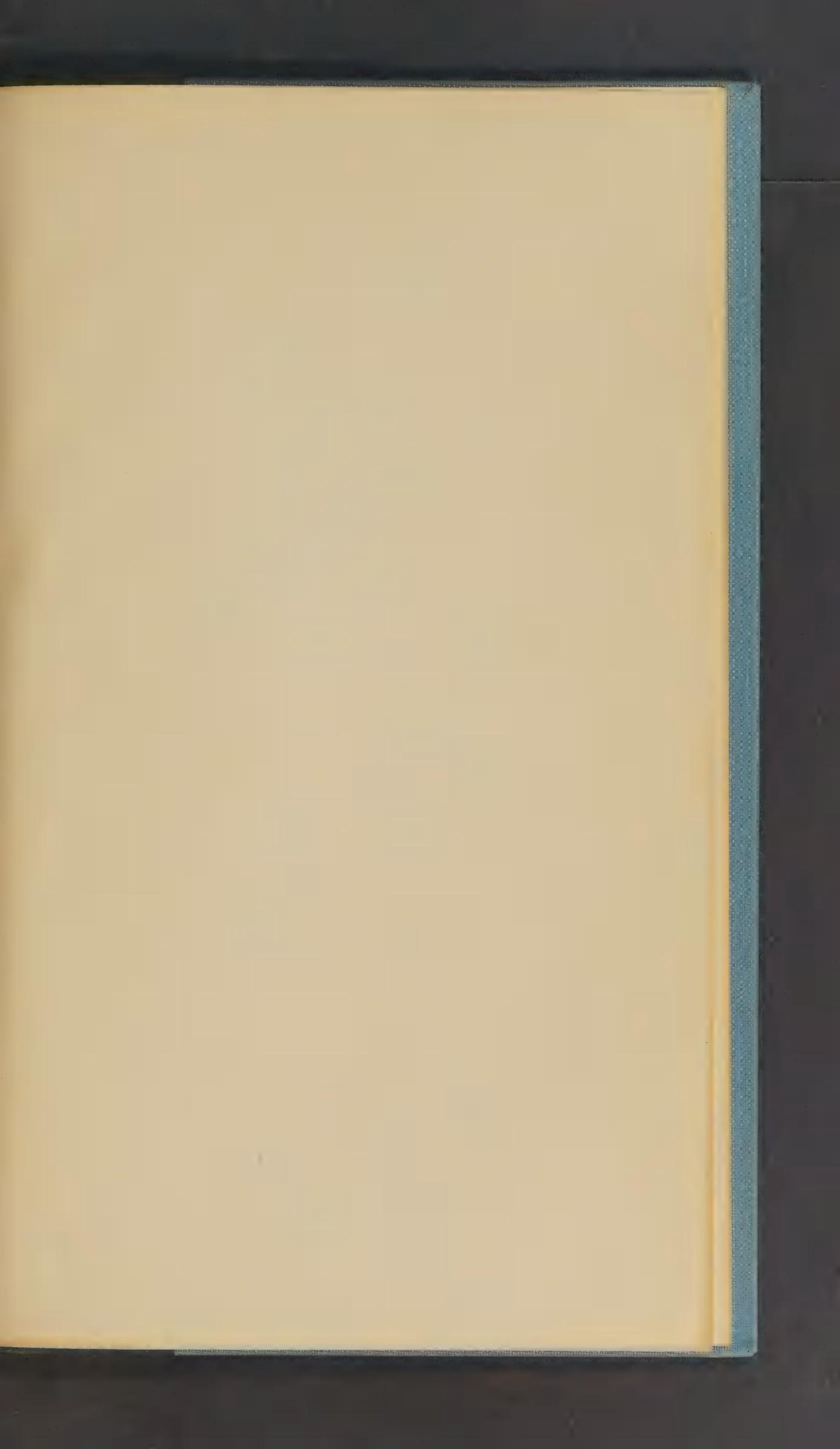
may be squeezed together, pressing out the watery particles, drying these small cakes, and then putting them in the abovementioned cerate paper. Or small seeds mixed with dry sand, and put in cerate paper, packed in proportionate glasses, and covered with a bladder or leather, and all such glasses again packed in a vessel, filled with a mixture, consisting of half culinary salt, the other half of two parts of saltpetre, and one part of sal ammoniac, will keep the seeds cool, and preserve their vegetative power.

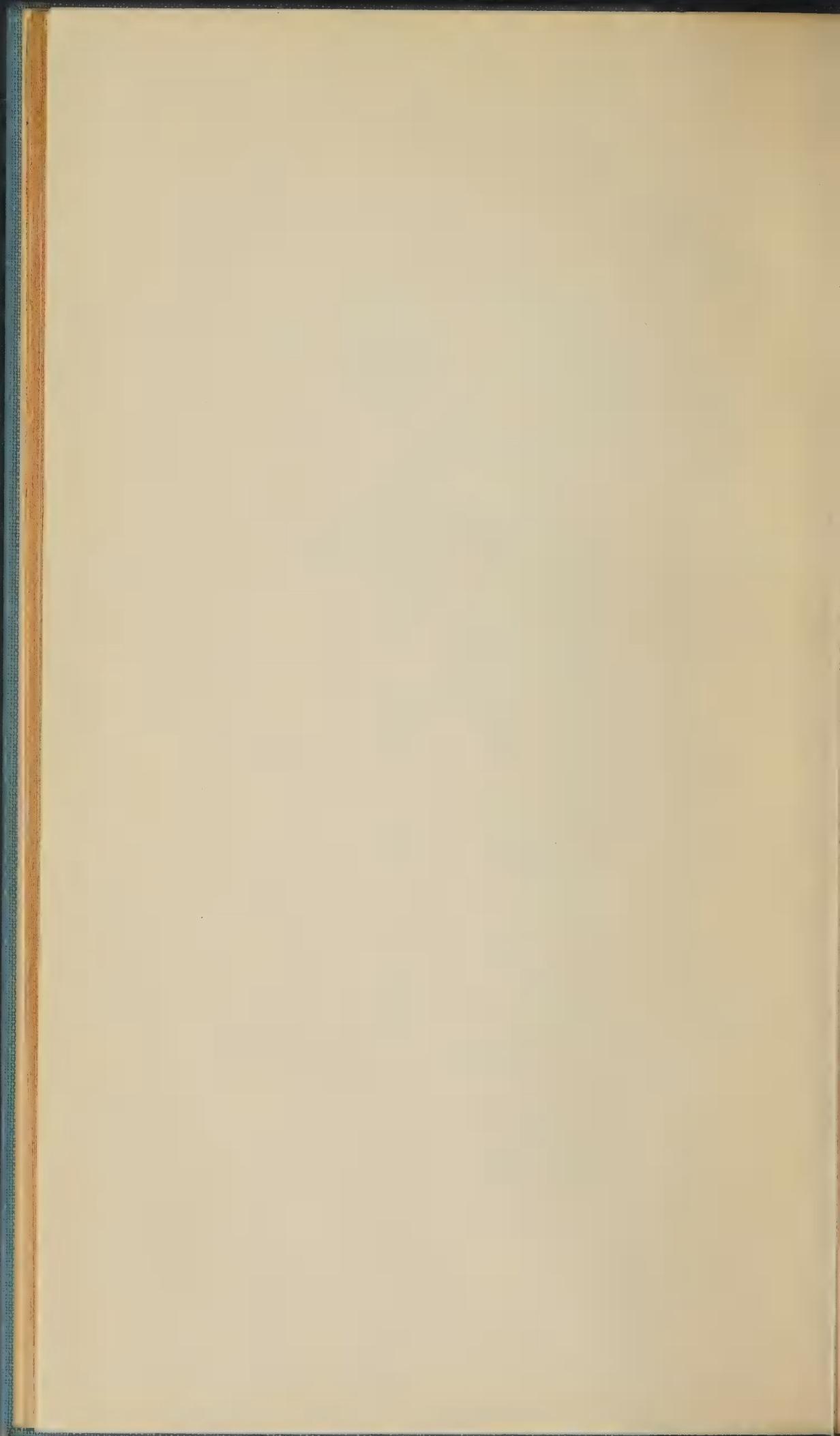
Plants or shrubs that are to be transported, must be taken out with a lump of soil covering the roots, which must be wrapped in wet moss, surrounded with paper or a Russian bast-mat and packthread ; plants thus packed may be put in a chest or box upon a layer of three inches deep wet moss in close rows, filling up all vacancies with moss. Some holes or slips in the lid of the box, covered with bast-mats or sail-cloth, will give them air, and a direction must be fixed on top, to keep the lid uppermost, and the box in an open but shady airy place, out of the spray of the sea : the same caution, in regard to air and sea, must be taken with the boxes containing seeds.

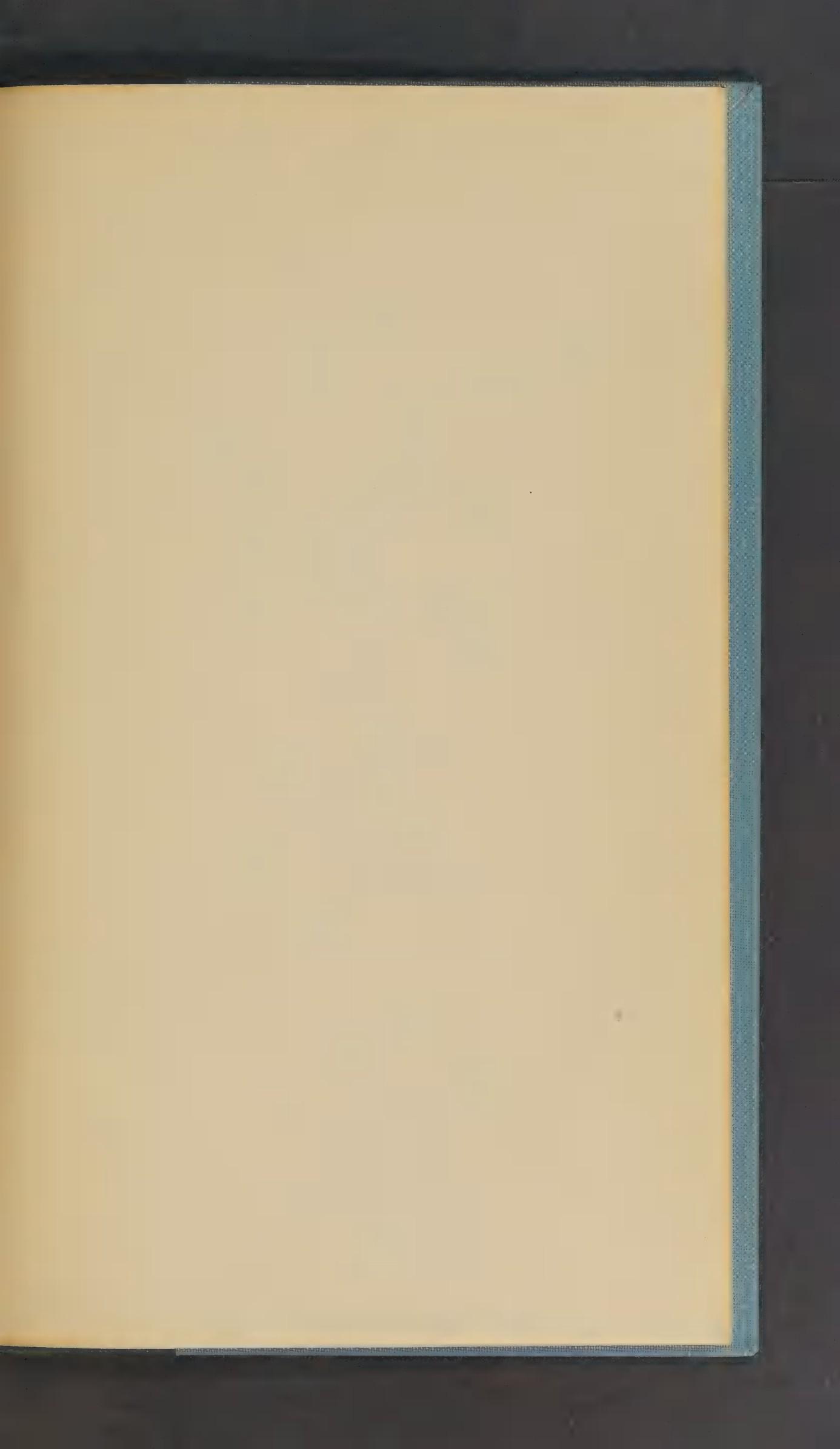
XII. Minerals, fossils, and petrefactions of all kinds, ought to be wrapt separately in papers, and the whole collection packed in hay, tow, hemp, or cotton, in a box, so that none of the specimens may touch or rub one another when the box is transported by land-carriage, or shaken by the rolling of the sea. Clays, earths, sands, and salts, are best preserved in glasses, or little glazed gally-pots covered with a bladder. Mineral waters may be safely filled in glass bottles, immediately after corked up and pitched, or covered with putty round the cork.

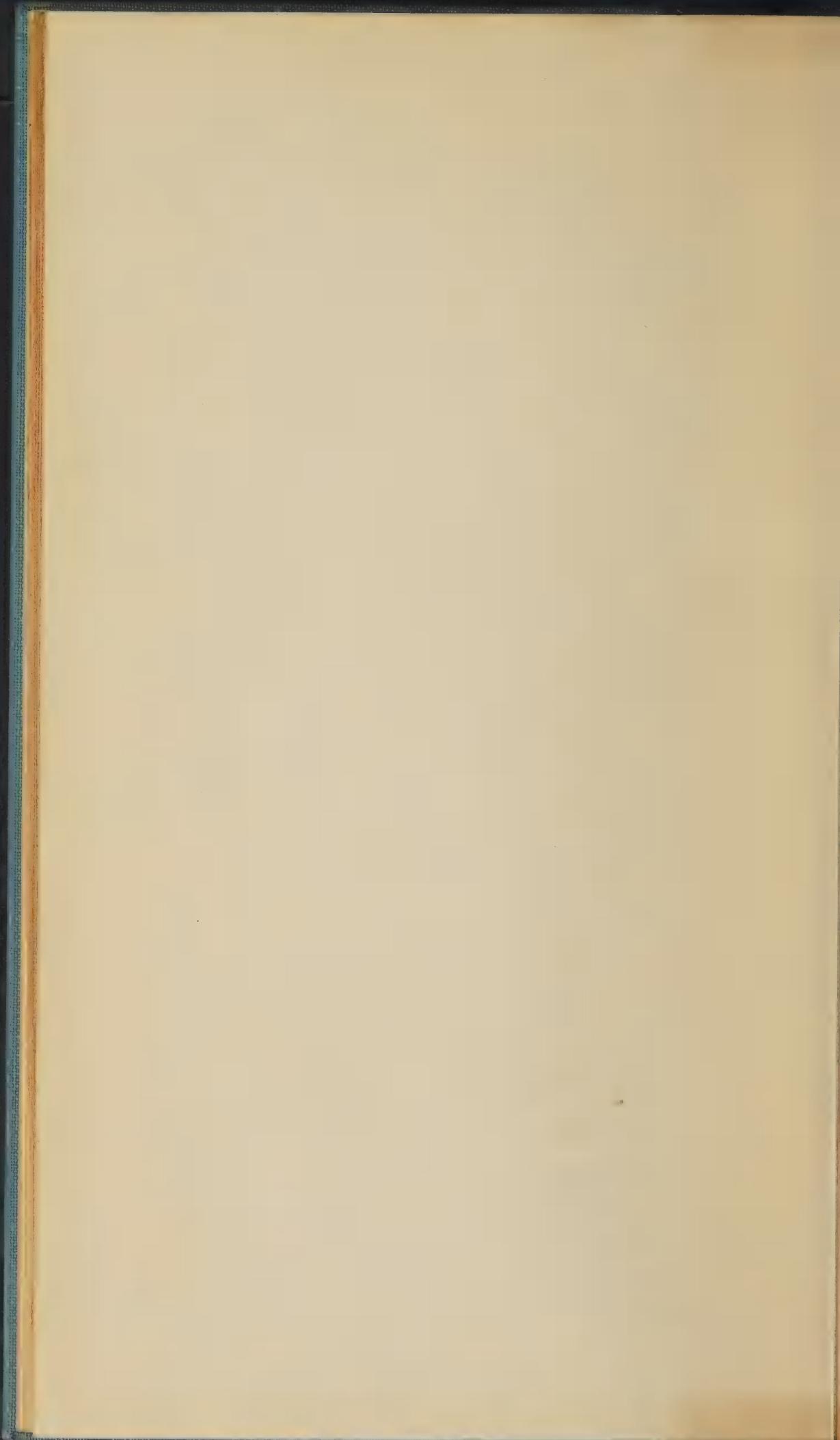
XIII. Though antiquities are no ways in connection with Natural History, it will however, be very acceptable, if the curious of North America will collect and communicate to their friends in Great Britain, all the inscriptions, arms, vases, utensils, idols, and other things, found in that continent, capable of throwing a light on the history and antiquities of its first inhabitants.

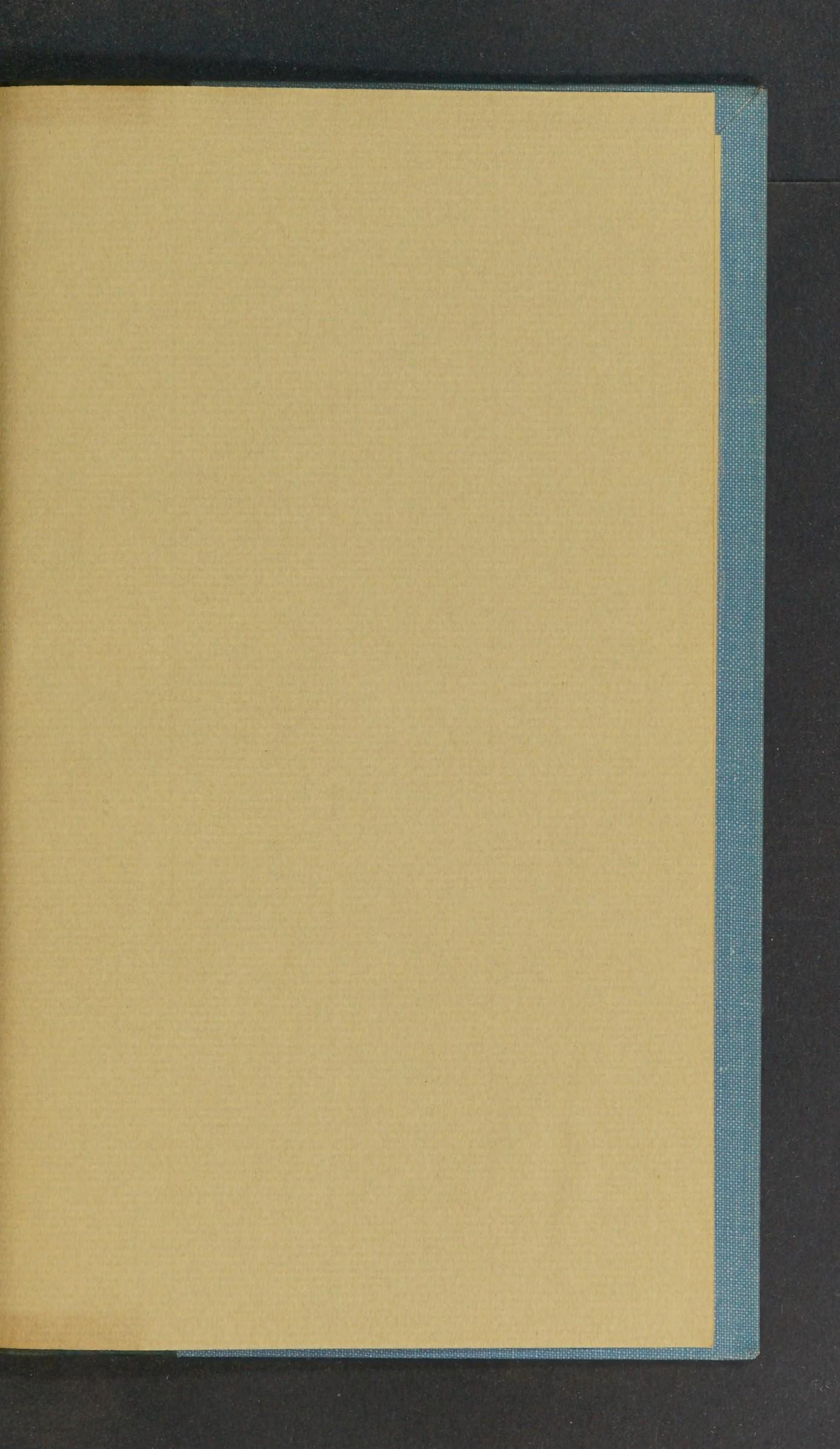
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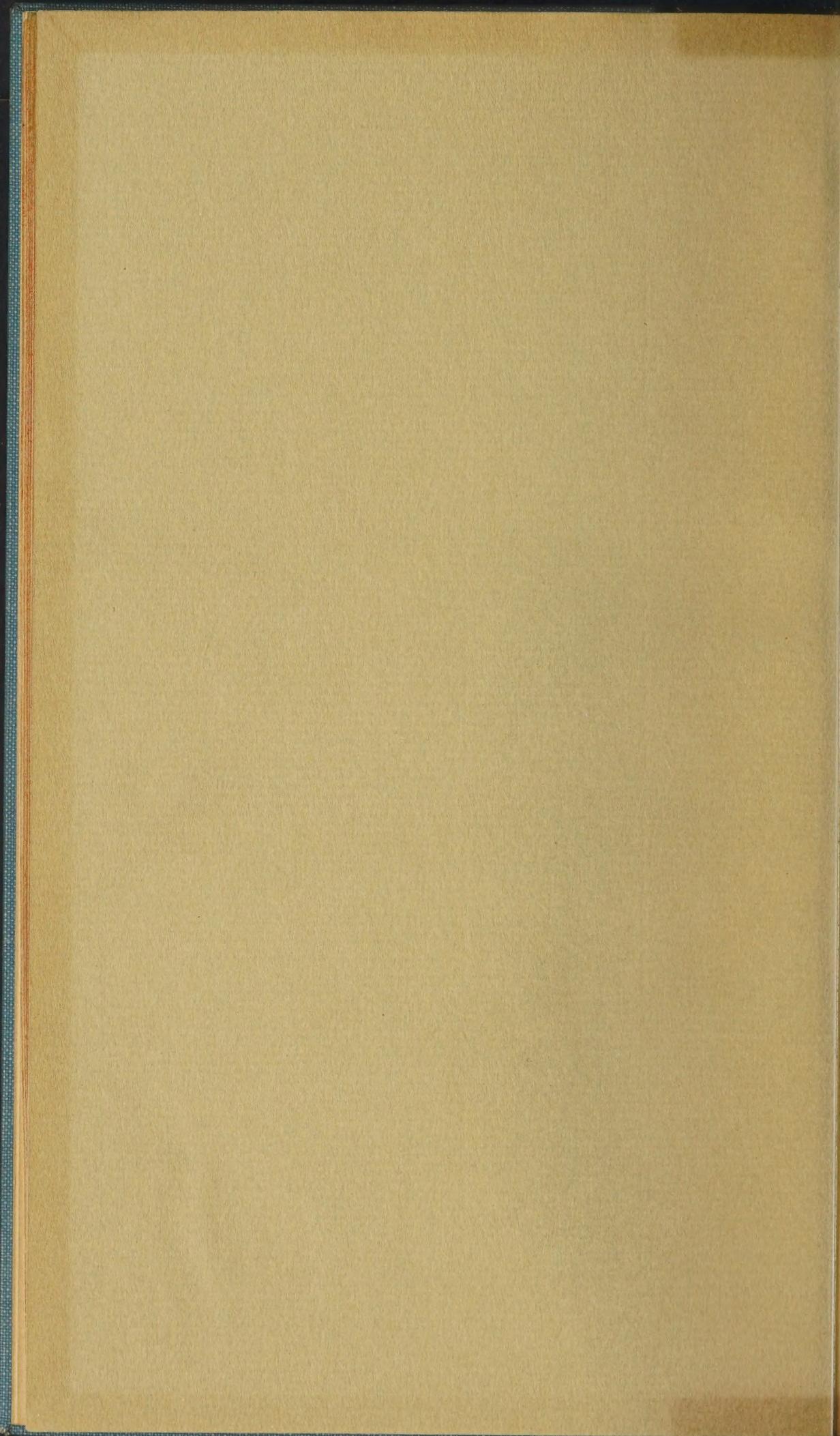












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